

2 apicalibus rarissime transversim connexis dehiscentes. *Pollen* globosum, vel ellipticum, 8-sulcatum. *Ovarii* vestigium nullum.—*Florum* ♀ partes ignotæ. *Achenia* 2 distincta, rarius solitaria, summo spicæ amentiformis (ei ♂ similis) affixa, involucellis omnino vel semi-inclusa, oblonga, subcompressa, plano-convexa, collateralia, erecta. *Pericarpium* siccum, coriaceum, glaberrimum (*mesocarpio* fibrillifero), indehiscens, apice glandulæforme pro tubilli transitu pervium, uniloculare. *Semen* unicum, basi affixum, loculo paulo brevius, apice acutum; *integumenta* 2, simplicia, ab imo usque ad medium coalita et membranacea, dehinc superne libera et distincta *testa* tegmine valde brevior, ore lato aperta; *tegmen* superne opacius, crassius, sæpe corrugatum, apice glandula carnosaj majuscula clausum; *tubillus* e centro glandulæ productus, erectus, elongatus, per foramen pericarpium prolatus, et sæpe longe exsertus, filiformis, teres, fistuloso-membranaceus, persistens, apice irregulariter laceratus aut breviter 2-labiatus, labiis aut brevibus concavis et subæqualibus, aut inconstanter inæqualibus; *hilum* cum *chalaza* basali confusum, substitutum; *raphe* nulla; *albumen* oblongum, compressum, obpyriforme, carnosulum, apice ad glandulam adhærens, embryone paulo longius; *cotyledones* oblongæ, compressæ, subfoliaceæ; *radicula* teres, supera, hilo contraria, cotyledonibus æquilonga vel dimidio brevior et earum sexta parte latitudinis. Suffrutices *cosmopolitani*, e basi ramosissimi, erecti, humifusi vel alte scandentes; ramulis teneribus, sæpius virgatis, oppositis, ternis, aut fasciculatis, in axillis nodosis; folia rudimentaria 2, opposita, vel plura, primum in vaginam brevem amplexicaulem apice 2-3-4-fissam coalita, demum sæpe disjuncta; flores parvi, spicati; spicæ parvulæ, in axillis sessiles, solitariae, binæ aut plures glomeratæ, vel in ramulum brevem terminantes, involucellis viridibus, perigonio sæpius aurantiaco, columna staminali viridescente, antheris læte flavis.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

The British Ferns. By Sir W. J. HOOKER; with Drawings by W. FITCH. 8vo. London: Reeve, 1861.

A WORK on the British Ferns from the pen of our great botanical chief, and illustrated by the pencil of one of our best floral draughtsmen, must attract general attention. We feel sure that a reference to it will always supply some information, accurate in its facts and correct in its delineation. Of course we must not expect too much: the pen of the author cannot go beyond the knowledge which he

possesses, nor the pencil of the artist convey information not afforded by the specimen before him. Here, at any rate, what we do get is perfectly trustworthy.

The term Ferns is intended to be understood in the Linnæan sense, as including *Filices*, *Equisetaceæ*, *Marsileaceæ*, and *Lycopodiaceæ*.

The plates are 66 in number, and to each of them a single leaf of letter-press is devoted. This latter contains a specific character for the species, a tolerably complete collection of references and synonyms, and some account of the plant, especially of its range in foreign countries; but no description. It does seem to us that a little less detail in the geographical part of these remarks (seeing that the author has given or is about to give them even more fully in his valuable 'Species Filicum'), and a tolerably complete description from his experienced pen, would have rendered the book more acceptable to the class for which it is intended. The majority of the collectors and cultivators of British Ferns would have been satisfied with a general statement on the former of these subjects, but do want the latter, and will be disappointed at not finding it. Also, an occasional discussion of the specific distinctions, real or supposed, between the allied plants would have added greatly to the value of the work. Almost all persons except professed botanists will probably now use the book for its plates alone; and concerning these it is not easy to use too strong terms of praise. They are incomparably the best representations of our ferns that have appeared. In some few cases, where a frond was too large for complete representation on the page, we should have liked to see a reduced drawing of it appended, so as to convey to the inexperienced an idea of its general aspect. For instance, *Polypodium alpestre* does not furnish to us a clear idea of the appearance of that elegant plant; also, a plate of the remarkable form or species called *P. flexile* by some authors might well have been given. It is true that a little scrap of *P. flexile* is drawn on the plate, but that is far from conveying the information required.

The two *Woodsias* are beautifully represented; and these plates fully confirm the now prevalent belief that there are really two species in Britain. They represent finer specimens than we have ever seen in this country—a fact that should be borne in mind by students, who have to learn to appreciate their differences when gathered in the very diminutive states in which we usually find them. It is then often far from easy to distinguish them; and we much wish that our eminent author had stated the best mode of doing so with tolerable certainty. Even the plates given by Sowerby in 'English Botany' and 'The Ferns' represent fronds which are larger than the usual wild state of the plants.

We cannot help suspecting that the venation is incorrectly drawn in the case of *Nephrodium cristatum*. Both Newman and Sowerby give a much more complicated structure to it; and, indeed, some authors have laid considerable weight upon its being greatly branched,

as a character to distinguish this plant from its near allies. The *Lastræa spinulosa*, *L. dilatata*, and *L. æmula* of authors are considered as one species, under the name of *Nephrodium spinulosum*. It certainly seems to us that they form three well-marked species, of which good plates are here given. A plate of *L. dumetorum* seems unnecessarily introduced; for it is surely nothing more than a young state of *L. spinulosa*: it here figures as a variety, on an equality in rank with the three above-named plants. Some remarks upon *L. uliginosa* would have been acceptable; for it is one of the most obscure of our plants, and the mature opinion of Sir W. Hooker concerning it would have been highly valuable; but it is passed over almost without notice. Whilst combining these three well-marked plants, as we think them, our author doubtfully separates, as a species, the *L. remota*. If it is true that hybrids occur in Ferns, we should be inclined to consider *L. remota* as one, having for its parents *L. spinulosa* and *L. Filix-mas*. If our information is correct, very few plants of it have been found.

Cystopteris alpina is another plant which might well have been omitted; for certainly it has no claim to be considered as a native of this country.

Hymenophyllum Wilsoni is very properly kept separate from *H. Tunbridgense*, and also from *H. unilaterale*. We are unable to understand the difficulty which some persons seem to find in distinguishing the *H. Tunbridgense* from *H. Wilsoni*. As our author most justly remarks, "It is hardly possible to see the two kinds growing frequently on the same rock, in separate patches, yet maintaining their respective characters, without being satisfied of their being really different."

The figure of *Isoëtes lacustris* is by far the best that we have seen. It represents the larger spores in a highly satisfactory manner, and so as to show the remarkable difference between them and the spores of the *I. echinospora*, which latter plant we find recorded as a native of Wales and Scotland in the new edition of Babington's 'Manual.' In all probability, Sir W. Hooker knew nothing of the existence of *I. echinospora* in Britain; for we believe that it was first announced by M. J. Gay in the 'Bulletin de la Société Botanique de France,' either late in 1861 or at even a more recent date.

There is a beautiful plate of the Guernsey form of *Isoëtes Hystrix*, under the name of *I. Duriei*. We have the authority of M. Durieu for stating that the Guernsey plant is *I. Hystrix*. It has fewer of the singular persistent woody leaf-bases (phyllopoies) than are found on specimens from Algeria; but such is also the case with the *I. Hystrix* of France. It is at once known by its comparatively smooth (very slightly tubercled, "très-finement réticulés") macrospores—the oophoridia of Hooker. These are well figured by Fitch, but are erroneously described as "strongly granulated." We possess authentic specimens of these plants, and are quite convinced that *I. Hystrix* is the correct name of that which grows in the Channel Islands: but our opinion is of no consequence; for M. Durieu is the

very highest authority in this curious genus, and his determination, even if it had not agreed with our own, would be conclusive.

And now we conclude our notice of this valuable addition to our botanical literature, merely adding that, if any of the plates can be selected as especially admirable, they are those of the *Equiseta*, which it seems to us that it would be impossible to surpass.

We need scarcely add that we strongly recommend the book to our readers.

Catalogue of a Collection of American Birds belonging to PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S., Sec. Z.S., Editor of 'The Ibis.' Illustrated by 20 Plates. 8vo, pp. 338. London: Trübner & Co. 1862.

Of late we have heard so much respecting the number of acres which model museums of natural history are said to require for their proper exhibition, that it may astonish some of our readers to learn that one of the most extensive collections in existence, illustrating the ornithology of the New World, is "arranged with the greatest ease in *ten* small cabinets measuring about 2 feet 1 inch by 1 foot 6 inches, and 3 feet in height." Such, however, is the case with that of Dr. Sclater, who has just published, under the title above quoted, an admirable list of his treasures, which will be found indispensable to those who are interested in that branch of study. This collection contains, we are told, about 4100 specimens, representing 2170 species, and is consequently among the largest ever brought together by any private person. The readers of these pages need not be told that the energetic proprietor of this comprehensive half-score of cabinets is one of the first ornithologists living; and the publication which we now briefly notice is well calculated to increase his reputation.

A work of this character, if reviewed at all, ought to be taken (as Napoleon defeated his antagonists) in detail; we therefore abstain from further comment, only observing that the synonymy of the species, and what is of no less importance, their geographical distribution, appears, as far as we are able to judge, to have been elaborated with great care. We will, however, take this opportunity of enforcing the growing conviction among naturalists, that the practical use of a zoological museum is commensurate with its adaptation for *real work*, and, consequently, that its true value, from that point of view, consists in its capability for being readily consulted. This condition is only to be obtained by a series of *unmounted* skins, such as that which forms the collection of the talented Secretary of the Zoological Society of London, and the abundant wealth of which this Catalogue is intended to reveal to the ornithological public.